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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/647,953	12/11/2000	Seiji Mishima	35 C14385	7439

5514 7590 01/29/2004

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EXAMINER

TALBOT, BRIAN K

ART UNIT	PAPER NUMBER
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1762

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/647,953

Applicant(s)

MISHIMA ET AL.

Examiner

Brian K Talbot

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7,18-20,22-24,26,71-73 and 95-105 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5,7,18-20,24,26,71-73,95-98,101,104 and 105 is/are rejected.
- 7) ☒ Claim(s) 3,4,22,23,99,100,102 and 103 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/2/04 has been entered.

2. Claims 6,8,25,27,44,45,52 and 53 have been canceled. Claims 99-105 have been added. Claims 1,3-5,7,18-20,22-24,26,71-73 and 95-105 remain in the application.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 5,24,101 and 104 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims are not further limiting as the Examiner sees no difference between the terms "detecting" in the independent claims and the terms "measuring" and "calculating" in the

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dependent claims. All terms described "distances", i.e. detecting distance, measuring distance and calculating distance.

Claim Rejections - 35 USC § 103

4. Claims 1,5,7,20,24,26,101 and 104 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 10-58668, JP 11-25852, Banno et al. (6,060,113) or EP 736,890 in combination with JP 10-5654 or JP 06-163,499.

JP 10-58668, JP 11-25852, Banno et al. (6,060,113) or EP 736,890

JP 10-58668, JP 11-25852, Banno et al. (6,060,113) or EP 736,890 all teach forming electron emitting device comprising a substrate, electrodes, an electroconductive thin film and an electron emitting region. A metal-containing liquid composition is applied between the electrodes by fine drop application means using a piezoelectric device or a bubble-jet system or an ink-jet system. Thereafter the applied composition is baked to produce the electroconductive film. The drops are applied between the electrodes by moving the substrate, nozzle or both. The timing of the droplet depositing and the angle of the substrate are controlled.

JP 10-58668, JP 11-25852, Banno et al. (6,060,113) or EP 736,890 fail to teach measuring/controlling the distance(height) from the droplet nozzle to the surface to be coated.

JP 10-5654 teaches a coating machine for applying paste to a substrate with a nozzle where the angularity/height of the nozzle from the coating surface is measured and controlled. Nozzle is held at a controlled height regardless of the contour of the substrate.

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JP 06-163,499 teaches controlling the distance from the nozzle to the substrate to maintain a constant distance between the nozzle and surface to be coated.

Therefore, it would have been within the skill of one practicing in the art to have modified JP 10-58668, JP 11-25852, Banno et al. (6,060,113) or EP 736,890 process by incorporating the measuring device as evidenced by either JP 10-5654 or JP 06-163,499 with the expectation of achieving a greater control of the subsequent deposited material.

Response to Amendment

5. Applicant argued that the references fail to teach or fairly suggest detecting a distance between said ejecting portion and surface to be coated”.

The Examiner disagrees. The secondary references clearly teach the claimed subject matter (see rejection above).

Allowable Subject Matter

6. Claims 3,4,22,23,99,100,102 and 103 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter:

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The prior art of record fails to teach or fairly suggest detecting distances between the ejected portion and one, some or all of the plurality of portions, i.e. more than one detection. The prior art teaches measuring the distances once and coating but not for measuring multiple time across the plurality of portions.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck can be reached on (571) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-1428.



Brian K Talbot
Primary Examiner
Art Unit 1762

BKT